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SAILE ACKERMAN LLC  
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EXAMINER
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KLIMOWICZ, WILLIAM JOSEPH

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* MORIS DOVEK and DAVID HU

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Appeal 2009-005311  
Application 10/781,000  
Technology Center 2600

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Before JOSEPH F. RUGGIERO, CARLA M. KRIVAK, and  
BRADLEY W. BAUMEISTER, *Administrative Patent Judges*.

RUGGIERO, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

## STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the Final Rejection of claims 1, 3-6, 19, and 21-24, which are all of the pending claims. Claims 2, 7-18, 20, and 25-36 have been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

Rather than reiterate the arguments of Appellants and the Examiner, we refer to the Appeal Brief (filed July 30, 2008), the Answer (mailed September 17, 2008), and the Reply Brief (filed November 19, 2008) for the respective details. We have considered in this decision only those arguments Appellants actually raised in the Briefs. Any other arguments which Appellants could have made but chose not to make in the Briefs are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

### *Appellants' Invention*

Appellants' invention relates to the minimizing of electromagnetic emission (EME) and the crosstalk between signal lines used to write and read tracks of magnetic disk drives. Single and multiple crossovers on either or both of the read and write signal lines are used to cancel unwanted crosstalk noise. (*See generally* Spec. 4:8–5:3).

Claim 1 is illustrative of the claimed invention and reads as follows:

1. A crosstalk and EME (electromagnetic emission) minimizing trace suspension assembly structure comprising:
  - multiple write lines which are crossed between a preamplifier connection point and slider write contact pads;
  - multiple read lines driven by preamplifier circuits;

said slider write contact pads, which connect said write lines to said trace suspension assembly structure;

slider read contact pads, which connect said read lines to said trace suspension assembly structure; and

multiple write lines driven by preamplifier circuits,

wherein said multiple write lines which are crossed between said preamplifier connection point and said slider write contact pads are used to cancel out time-delayed (transmission line effects) parts of said crosstalk and said EME,

wherein a single crossing point of said write lines between said preamplifier connection point and said slider write contact pads is placed halfway between said preamplifier connection point and said slider write contact pads.

### *The Examiner's Rejections*

The Examiner's Answer cites the following prior art references:

Murata <sup>2</sup>	JP 06-342858	Dec. 13, 1994
Carpenter	WO 98/20485	May 14, 1998

DAVID HALLIDAY & ROBERT RESNICK (hereinafter "Halliday"),  
FUNDAMENTALS OF PHYSICS 557-58 (2d ed. 1981).<sup>3</sup>

Claims 1, 3-6, 19, and 21-24, all of the appealed claims, stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Carpenter in view of Murata.

### PRINCIPLES OF LAW

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of

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<sup>2</sup> An English language translation (August 2008) has been provided by the USPTO STIC Library.

<sup>3</sup> This reference is not included in the Examiner's statement of the rejection but, rather, is relied upon as evidence in support of the rejection.

obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966) (stating that 35 U.S.C. § 103 leads to three basic factual inquiries: the scope and content of the prior art, the differences between the prior art and the claims at issue, and the level of ordinary skill in the art). Furthermore,

“there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness” . . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.

*KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

## ANALYSIS

Appellants’ arguments at page 9 of the Appeal Brief and pages 3-4 of the Reply Brief, with respect to the Examiner’s obviousness rejection of independent claims 1 and 19, focus on the contention that Murata does not overcome the deficiency of Carpenter in disclosing the placing of a crossing point of write lines *halfway* between a preamplifier connection point and slider write contact pads. According to Appellants, while Murata illustrates and describes the crossing of signal lines which results in the magnetic fields  $M_1$  and  $M_2$  generated from currents  $I_1$  and  $I_2$  to be “canceled equivalently,” there is no indication that the signal crossing must occur at a halfway point.

We do not find Appellants’ arguments to be persuasive of any error in the Examiner’s stated position. While Murata’s textual description does not explicitly state that the signal lines 1 and 2 are crossed at a halfway point,

we agree with the Examiner that an ordinarily skilled artisan would have reasonably drawn this inference from Murata's disclosure. *See KSR*, 550 U.S. at 418. As explained by the Examiner (Ans. 4-5), Murata explicitly states that the crossing of the signal lines results in the undesirably generated magnetic fields being "canceled equivalently," and further depicts this signal line crossing in the drawing figures as occurring at a symmetrical mid-point. (Murata, Figs. 1-5; ¶ [0010]).

We further agree with the Examiner that the Halliday reference provides persuasive evidence in support of the position that, in order for generated magnetic fields to be canceled equivalently as explicitly stated at paragraph 10 of Murata, the signal lines cannot cross at some arbitrary point but, rather, must necessarily cross at the halfway point in order to balance out the opposing magnetic fields.<sup>4</sup> (Halliday, pp. 557-58). In particular, Halliday discusses the Biot-Savart Law which relates current sources to their generated magnetic fields. We adopt the Examiner's analysis and line of reasoning establishing the halfway crossing point teachings of Murata, as well as the Examiner's articulated line of reasoning establishing a basis for the proposed combination of Carpenter, Murata, and Halliday. (Ans. 5-11).

We further find Appellants' arguments regarding the merits of the Halliday reference to be unpersuasive. While Appellants contend (Reply Br. 3-4) that other factors may be present which might result in the equivalent canceling of magnetic fields such as in Murata, Appellants have not

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<sup>4</sup> At page 3 of the Reply Brief, Appellants have challenged the timeliness of the Examiner's introduction of the Halliday reference for the first time in the Answer. This challenge is ineffective, however, and is deemed waived as Appellants did not file a petition as required by 37 C.F.R. §1.181(a). *See* MPEP 1207.03(IV).

identified what those factors might be, nor how they may influence the equivalent canceling result. The arguments of counsel cannot take the place of evidence in the record. *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997).

We also find to be without merit Appellants' argument (App. Br. 8-9) that, in contrast to the purpose of Appellants' invention which is to prevent interference from the trace assembly from interfering with external units, Carpenter is directed to a "self-shielding" device which protects the trace assembly from interference from external units. We find Appellants' arguments not commensurate with the scope of the claims as there is no claim language directed to Appellants' argued distinction. We also agree with the Examiner (Ans. 12) that, to whatever extent Carpenter may have a "self-shielding" function, any such function is not precluded by the claim language.

Lastly, we are unpersuaded by Appellants' argument (App. Br. 10-11) that Murata, which is directed to a hybrid integrated circuit, is from a different field of practice than both Carpenter's and Appellants' devices which are in the field of reducing electromagnetic interference in magnetic recording assemblies. We agree with the Examiner that, while Murata is indeed directed to a hybrid integrated circuit, such an integrated circuit nonetheless has various active and passive components connected through a layer interconnection network for transmitting signals. As previously discussed, Murata discloses a signal crossover at a mid-point of the signal lines to reduce any undesirable electromagnetic noise emission interference (§ [0010]) generated in the transmitting signal lines.

Accordingly, we find no error in the Examiner's determination (Ans. 20-21) that an artisan would have logically consulted the teachings of Murata in attempting to solve electromagnetic interference problems associated with a magnetic recording assembly such as in Carpenter. A reference is reasonably pertinent if, even though it may be in a different field of endeavor, it logically would have commended itself to an inventor's attention in considering his problem because of the matter with which it deals. *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992).

For the above reasons, we sustain the Examiner's 35 U.S.C. § 103(a) rejection of independent claims 1 and 19, as well as dependent claims 3-6 and 21-24 not separately argued by Appellants.

#### CONCLUSION OF LAW

Based on the analysis above, we conclude that the Examiner did not err in rejecting claims 1, 3-6, 19, and 21-24 for obviousness under 35 U.S.C. § 103(a).

#### DECISION

We affirm the Examiner's decision rejecting claims 1, 3-6, 19, and 21-24 under 35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED



Appeal 2009-005311  
Application 10/781,000

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